

DANA (CHAS. L.)

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BY

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A STUDY OF THE ANÆSTHESIAS OF HYSTERIA.¹

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THE object of my paper is to report the results of a study of the anaesthetics of hysteria. This is a subject upon which a good deal has been written; but, as those familiar with hysteria will admit, there still remain many questions to be settled, and their importance, I think, need not be urged. Objective symptoms are always very greatly desired in medico-legal cases, as well for guidance in diagnosis and treatment, and anaesthesia in some of its forms has the value of an objective symptom. The anaesthetics found in hysteria may, it is true, be sometimes caused by organic disease; but this is not the case often, nor can organic disease ever present the same association of symptoms as those found in the profoundly marked cases of hysteria.

I shall not go into any extended history of the study of hysterical anaesthesia. The credit of initiating and carrying out investigations of the special-sense disorders belongs to Charcot, Galezowski, Landolt, Badal and Binet, Pichon, and Charcot's pupils, Turette, Guinon, and others. Special articles have appeared in Germany by Oppenheim, Thomsen, Moravcsik, Babinsky, and Schiele. Among English writers, Thorburn, H. Griffith, Beevor, Bastian, and Buzzard, and in this country, Putnam, Walton, W. O. Moore, Mitchell and de Schweinitz have made important contributions.

My studies were made upon thirteen cases of hysteria, in men and women, of traumatic and non-traumatic origin. Most of them were cases under the observation for a long time of myself and other neurologists, and in all there was perfect agreement as to diagnosis, a diagnosis justified in several cases by the subsequent complete recovery of the patients.

The histories of my cases illustrate very well the four points in regard to hysteria which modern researches have tended to bring out. These are: 1. The comparative frequency of the disease in men. 2. The common characteristics of the disease, whether caused by shock, trauma, local irritations, or general depressing influences. 3. The presence of

¹ Read before the Association of American Physicians, May, 1890.



some of the objective symptoms or stigmata of the disease in all cases.

4. The combination of true hysteria with organic disease.

As I have stated, the class of symptoms which I particularly investigated was the anæsthesias. The hyperæsthesias, pains, paralyses, tremors, spasms, crises, etc., are referred to incidentally, and not in detail. Nor have I time or space to give full reports of each case. I shall only present enough to justify my diagnosis.

The points especially noted were the cutaneous sensations of touch, temperature, and pain, their disorders and the distribution of them, the muscular and articular sensations, the vision, hearing, taste, smell, and the reflexes.

The cutaneous, the muscular, and the articular sensations were examined in the usual way. The deep sensibility was tested by thrusting needles into the periosteum and joints. The vision was tested for acuity, visual field, and color-sense. The visual fields were tested with Emerson's perimeter. The fundus was examined by myself or others. Hearing was tested for acuity both by aërial and bone-conduction. It was also tested for high notes by means of Galton's whistle, and for low notes by means of a bass-viol string which gave a note of sixty to seventy vibrations per second.

It will be seen that the persons whose histories I relate are not sufferers from the grand hysteria of La Salpêtrière, with cycles of convulsive seizures. The patients were generally quiet, much depressed mentally, discouraged by suffering, lacking vitality, hopefulness, and volitional power. They were made ill by depressing influences, hard work, and poor food, or by injuries or profound mental shocks. Seven were men, and they were among the most typical cases. Nearly all were of foreign birth, or immediate descent, and generally of German, Polish, or Russian origin.

CASE I. Hysteria with anæsthesia.—Woman, aged twenty-four years, cloak-maker, Hungarian. Childbirth, puerperal fever, abdominal and ovarian neuralgia, oophorectomy. Symptoms date back three years to birth of a child and fever. Mental depression, apathy, general weakness, neuralgias, no paralysis.

Sensory symptoms: Has analgesia and tactile anæsthesia in patches over limbs. No thermo-anæsthesia or ataxia. Ears: Vision good, visual field limited in both eyes, color-sense not tested. Hearing normal. Taste normal. Smell normal. Discharged unimproved, and is now in about the same condition.

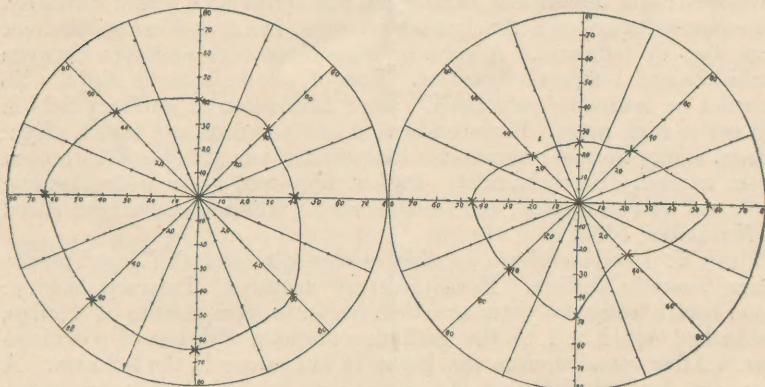
CASE II. Hysterical hemianæsthesia.—Moses S., aged fifty years, married, tailor, German. Family history negative. Personal history: has been in good health until seven years ago, then had headaches and nasal trouble. Three years ago had attacks of transitory neuralgia of infra-maxillary branch of trigeminus with aphasia. Then had and still has occasional diplopia, impairing vision. Attacks of a syncopal character

lastly developed, and obliged him to give up work and enter the Montefiore Home, June 2, 1889.

Status præsens: A small man, prematurely old, quiet manner. Slight weakness of right arm and leg; no facial or ocular paralyses. *Sensation—Cutaneous:* Tactile and pain anaesthesia on right side. Temperature-sense preserved on examination in June. Later (September) it disappeared. No loss of muscular or articular sensation; no ataxia. Mucous membrane of mouth hemianæsthetic; pharyngeal reflex not abolished on either side. *Eye:* Concentric limitation of visual field, more in right eye; no disturbance of color-sense. Fundus showed no special change; has a presbyopic eye. *Ear:* Some diminution of acuity of hearing in right ear, especially to bone-conduction. Limitation of hearing to high and low notes in right ear. *Taste, hemiageusia.* *Smell, hemianosmic.* *Knee-jerk lessened, especially upon the right side.*

During the subsequent seven months the patient had attacks of the nature of spontaneous hypnotism. In one attack the Home physician, Dr. Ettinger, was suddenly called to patient, who was declared by the nurse to be dying. Pulse slow, strong, and full; temperature and color normal; pupils normal; pupillary reflexes preserved. State pronounced to be the hypnotic. Aroused by blowing into his face and irritating the conjunctiva with the pulp of one finger. A few passes made over the eyes sufficed to cause the patient's return to his former condition.

CHART I.



$$O. S. V. = \frac{20}{200} : \text{with } + \frac{1}{36} = \frac{20}{40}.$$

$$O. D. V. = \frac{20}{200} : \text{with } + \frac{1}{36} = \frac{20}{40}.$$

Color perception perfect. Dacryocystitis.

April, 1890: Patient still exhibits his hemi-paresis and anaesthesia but is better of his hypnotic and neuralgic troubles, and is stronger.

CASE III. *Hysterical anaesthesia and vomiting.*—Israel S., aged thirty-seven years, married, tailor, German. Family history negative. Personal history: No illness until three years ago, when he began to suffer from headaches, left-sided pains, and attacks of vomiting.

Entered the Montefiore Home June 12, 1887. From that time to

September, 1889, he presented about the same symptoms. He vomited food daily, generally ten to fifteen minutes after taking it, and without nausea. Despite continual vomiting he lost no flesh. Has no crises except of vomiting and pains in head; mental condition depressed. Forced feeding, medicinal treatment, lavage, did little good. Weight continued 108 to 110 pounds.

Sensation—Cutaneous: Complete bilateral analgesia, except in first branch of trigeminus, where it is less marked. Thermal sense not noted. Tactile anaesthesia over same area less complete. No muscular and no articular anaesthesia. No ataxia. Eyes: Vision normal; concentric limitation of visual field of both eyes. Reflexes: Exaggerated knee-jerk. At one time he had retention of urine.

CASE IV. *Hysterical paraplegia*.—Mrs. Mary D., aged twenty-eight years, widow, seamstress, Hungary. Family history negative. Personal history: Well up to five years ago; first child at twenty years, normal labor; second pregnancy at twenty-third year, during it lost her husband suddenly; labor at term was difficult, and was followed by much menorrhagia. Since that time has had three operations on the womb for lacerations, etc. February, 1889, double oophorectomy was performed. Since then she has been unable to walk; has attacks of crying with sensation of complete powerlessness; has less pain than before operation. After admission she had hysterical convulsions which could be controlled by ovarian pressure.

Status præsens: A dark, sallow, anaemic-looking woman; muscles well developed; has incomplete paraplegia, and walks with great difficulty. *Sensation*—Cutaneous: Analgesia over right hand, and in patches over arm, less in left arm. A zone of anaesthesia over abdomen between umbilicus and Poupart's ligament. Loss of tactile sense is slight. No thermal or muscular anaesthesia. Ear: Limitation of auditory field in left ear to high notes. Bone-conduction and low notes not tested. Eye: Visual acuity normal; concentric limitation of visual fields of both eyes. Taste normal. Smell normal. Patient improved under hydrotherapy, pack and half-bath daily, and faradic brush. She was discharged cured in November, 1889.

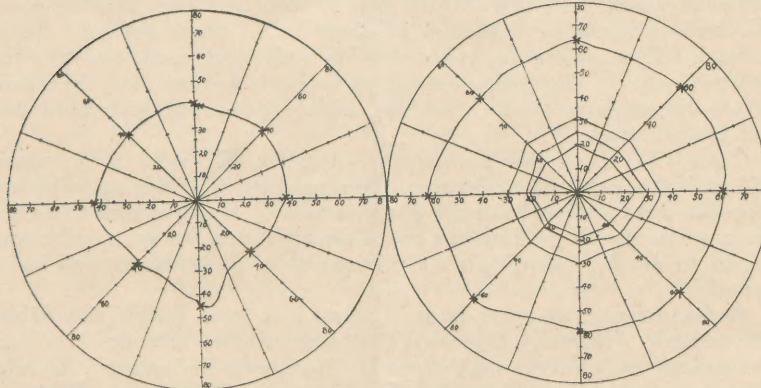
CASE V. *Hemianæsthesia, brachial monoplegia*.—Sarah C., aged twenty years, domestic, Galicia. Family history negative. Personal history: Good health until two years ago, then began to have attacks of vertigo, headache; would fall to the ground, sometimes with loss of consciousness. After some months she began to lose power in the left arm. A year ago entered Bellevue Hospital; here her seizures ceased under moral treatment, but after two months her monoplegia suddenly became complete.

Status præsens: Looks old for her age, muscular and adipose tissue well developed. Height five feet three inches; no disturbance of facial or ocular muscles. Pupils react normally. Complete flaccid paralysis of left arm; she cannot move arm, forearm, or fingers; no atrophy at all, as shown by measurements. Electrical reactions show slight quantitative diminution of sensibility and contractility of both currents. *Sensation*—Cutaneous: She has cutaneous hemianæsthesia of the left side as far down as the knee. At one time it had included the whole of the left side. There is loss of tactile-, pain-, and temperature-sense. Muscular and articular sense still somewhat retained; she knows the position and movements of her arms, but not of her fingers. Eyes:

Concentric limitation of visual field of right eye. Amblyopia of left eye. She can see light, and, to a certain extent, form, but cannot recognize colors or distinguish the nature of objects. No disturbance of color-sense in right eye. Mucous membrane of mouth anaesthetic. Pharyngeal reflex absent on anaesthetic side only. Ears: Some deafness in left ear; watch heard at three inches from left ear, at ten inches from right ear. Slight bone-deafness. Marked deafness to high notes, as tested by Galton's whistle, and to low notes, tested by bass-viol string. Smell, left hemianosmia. Taste, hemageusia. Tendon-reflexes lessened on affected side; organic reflexes normal. Patient is depressed mentally, but is very anxious to get well, and has no crises. Has been hypnotized several times with no benefit; is improving under hydrotherapy and electricity and strychnine hypodermically.

May 12. There is considerable return of motor power in the left arm; at first there was much tremor, but it is subsiding with the increase of strength. *Cutaneous sensations*—arm and face: Tactile sense is slightly diminished, especially for localizing, but very light contact is felt without delay. Pain-sense is still nearly abolished. Temperature-sense is entirely absent to both heat and cold. Pain is felt, however, in the periosteum when the bone is struck by a needle. Weight-sense is impaired, but articular sensations, as tested by posing and coördinating the limbs, are perfect. There is no ataxia. Vision: There is some dimness of vision in the right eye, but no loss of color-sense. In the left eye there is loss of color-sense, and almost complete loss of vision. She

CHART II.



$$O. S. V. = \frac{5}{200} : \text{with } -\frac{1}{20} = \frac{20}{40} +. \text{ Perioptic choroiditis atrophica.}$$

$$O. D. V. = \frac{6}{200} : \text{with } -\frac{1}{20} = \frac{20}{40} +.$$

Color-sense absent in left eye. Field limited, with some changes in right eye, as shown by chart. The order of colors from within out was green, red, blue, violet, yellow.

recognizes a light, and imperfectly a form, but cannot tell how many fingers are held up. With colored glass over this eye she has monocular diplopia on repeated tests. With colored glass over both eyes she has

diplopia. With colored glass over both eyes she also insists that the image of the left eye is smaller—*i. e.*, micropsia. The visual field is contracted most in the left eye, where there is also loss of color-sense. In the right eye there was a little change in the arrangement of the colors, but no inversion of formula, except that it was green, red, violet, instead of violet, green, red. Hearing to the watch in right ear at ten inches, left ear three inches. Deafness to tuning-fork in left ear when vibrating on the teeth or the mastoid. Deafness in left ear to high note and low notes.

CASE VI. *Hysterical paraplegia*.—Fanny H., aged fifty-two years, widow, seamstress, Prussia. Family not neurotic. Personal history: Three convulsive seizures at the beginning of menstruation; menorrhagia and various minor uterine troubles during her life; married twice, had one child and one miscarriage; was anaemic and overworked for some years prior to present trouble; always constipated, and had some rectal trouble from operation, to which she ascribes her present illness. This began in December, 1888, with severe lumbar and pelvic neuralgias. Tremor in arms developed rapidly, and, at the same time, weakness in the lower limbs.

Status præsens, September, 1889, nearly a year after the disease began: She has paraparesis more in right leg, and walks with difficulty. Right arm weaker than left. A fine tremor increased on voluntary movement, most marked in right arm but somewhat in left. Ocular muscles normal; no facial paralysis. *Sensation*—Cutaneous: Patches of analgesia over feet and ankles. No tactile or thermic anaesthesia or ataxia. Knee-jerk somewhat exaggerated. Eyes: Vision good, slight temporal limitation of visual field in both eyes (65° in each). Ears: Hearing good. No bone-deafness or limitation of aural field. Taste normal. Smell normal. This patient improved steadily under treatment, and was discharged cured. The symptoms suggest multiple sclerosis, but the course of the disease disproves it. She was markedly neurotic and emotional, but had no crises.

CASE VII. *Hysterical paraplegia*.—Augusta K., aged forty years, widow, buttonhole-maker, German. Personal history: Since age of thirty-four has had occasional attacks of rheumatism. Has had nine children. No nervous disorder. Lost the use of the right arm for two months, and began to develop paraplegia and various forms of neuralgia, especially spinal.

Status præsens, two years later: Patient is in good health, but flabby and anaemic. Mentally depressed and melancholic. Paralysis so that she cannot walk except with support. No spasms or tremor. Muscles not atrophied except from disuse. *Sensation*—Cutaneous: Bilateral analgesia and tactile anaesthesia over four extremities, but not face; no thermo-anesthesia or ataxia. Eyes: Vision good. Pharyngeal reflex normal. This patient continued for nearly two years paraplegic and suffering from neuralgias and headaches, occasionally vomiting and dysuria. She is now very much improved, and her anaesthesias have disappeared.

CASE VIII. *Hysterical incontinence and vomiting, hemianæsthesia*.—Fanny G., aged twenty years, single, seamstress, Russia. Family history negative. Personal history: Had no special illness until her fifteenth year. Then after exposure had dysuria and bloody urine. Suf-

ferred from this at intervals ever since. Came to the United States one and one-half years ago, and for two months was well; then suddenly developed cystitis and retention. Has had two vaginal operations and a suprapubic cystotomy done for relief of vesical pain, spasm, and cystitis, but with no success.

Status præsens, September, 1889: Patient is of small stature, somewhat thin. She remains in bed most of the time, and cries frequently on account of her pains. She is depressed and emotional, and tends, it is believed, to exaggerate greatly her sufferings. No paralyses or spasmodic symptoms. She has hysterical crisis of an emotional character. *Sensation*—Cutaneous: She has analgesia in patches over the extremities, more on the left side; no tactile or thermo-anæsthesia or ataxia. Eyes: Vision good; field much limited concentrically in both eyes and decidedly. Other special senses normal.

March, 1890, six months later: The patient's bladder ceases to trouble her, and she now has obstinate vomiting. *Sensation*—Cutaneous: She has left hemianæsthesia to touch and pain, very slightly to temperature; pharyngeal reflex absent on affected side. Eyes: Vision good, field limited, no disorder of color-sense. Smell normal. Taste normal. Hearing: Hyperesthesia; no limitation of field to high notes.

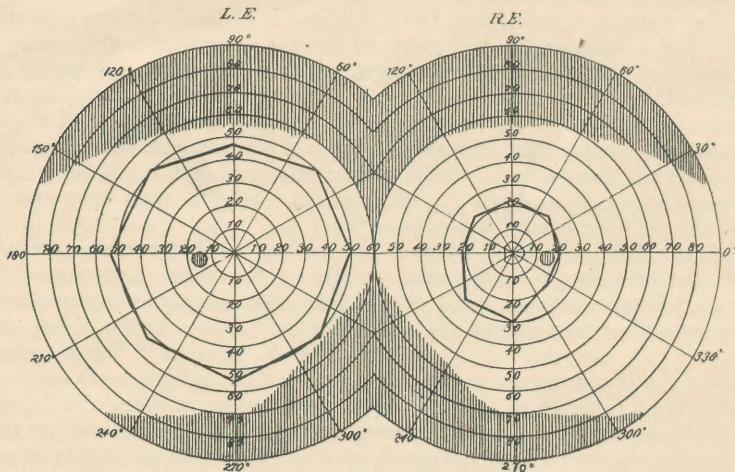
CASE IX. *Hemiplegia from injury; hysterical anæsthesia*.—M. L., aged forty-seven years, married, German. Five years ago injured in right side of neck by an iron rod, causing, it is alleged, a perforating wound. Injury followed by right hemiplegia and right facial paralysis. Operated on by Dr. Robert Abbe for left tic douloureux with great temporary relief, the second branch of the fifth nerve being removed.

Status præsens, April, 1890: Patient is a well-nourished, healthy-looking man, complaining only of neuralgia in the left inferior maxillary nerve. He has paresis and some rigidity of the right arm. Dynamometer: right hand, 30; left, 45. He has apparent paresis of left leg, but tested on pedometer he pushed 140 pounds with the left leg and 100 pounds with the right leg. No facial or ocular paralysis. Tendon-reflexes exaggerated on paretic side. *Sensation*—Cutaneous: Anæsthesia of left side of face and right side of body and extremities. Left face: Loss of tactile and pain sense. Right arm and hand: Diminution of tactile and pain sense; retention of cold-sense and weight- and muscle-sense. Eyes: Vision good, but is color-blind. Concentric limitation of visual field in both eyes; fundus normal. Taste: Left hemiageusia. Smell: Left hemianosmia.

CASE X. *Traumatic hysteria, hemiplegia, and hemianæsthesia*.—Adolph N., aged fifty years, married, clerk, Moravia. Family history negative. Personal history: A man of nervous temperament but good habits, and no previous nervous disorder. Was struck on the head by a dead electric-light wire, knocked down, taken in a semi-unconscious state to a hospital, where he was found to have right hemiplegia, except of face, eyes, and tongue, right-sided intention-tremor, right hemianæsthesia, mental depression; no crises, knee-jerk lessened. *Sensation*—Cutaneous: Right side anæsthesia most marked in extremities, well marked for pain and cold, less marked for tactile sense; no muscular or articular anæsthesia. Eyes: Decided limitation of visual field, especially in right eye. No loss of color-sense. Fundus normal. Hearing: Good to voice and watch in both ears, but complete bone-deafness in right ear, and deafness

to high notes and to low notes. Smell: Left hemianosmia almost complete. Taste: Left hemiaguesia. Pharyngeal reflex absent.

CHART III.



$$V = \frac{15}{60}. \text{ Inner circle shows limitation of visual field for colors.}$$

CASE XI. *Hysterical paraplegia.*—Mrs. K., aged thirty-two years, married, United States. Neurotic family. Had incontinence of urine and migraine as a girl. Married at nineteen; child born at twenty; after this, better for several years. At the age of twenty-eight, pains in back and legs very severe, with weakness of lower limbs. Was treated gynecologically for a long time. Now has paraparesis and pains in legs; no bladder trouble, atrophy or anaesthesia; knee-jerk normal. Has insomnia, nervous crises, limitation of visual fields, but no color-change or auditory or other special-sense troubles.

CASE XII. *Hysterical paraplegia, traumatic.*—William B., aged twenty-six years, single, United States. Injured by fall in August, 1885. In St. Luke's Hospital from October, 1885, to May, 1886, and had convulsive attacks there. Right hemiparesis, especially of leg; walks with difficulty. No atrophy; but exaggerated knee-jerk and ankle-clonus. Slight analgesia, right leg and lower half of thigh, and right forearm and hands. Thermo-anæsthesia over same area; contact-sense good. No muscular anæsthesia. Concentric limitation of visual field; scotoma for red (due to tobacco?). Fundus shows a tobacco-atrophy.¹ Auditory field normal. No ageusia or anosmia.

CASE XIII. *Traumatic hysteria, right hemiplegia, and hemi-anæsthesia.*—August J., aged thirty years, mechanic, German. Personal history: Patient has had good health, good habits, no nervous disease. Injured slightly by electric wire in August, 1889; received no electric shock, but was extremely frightened. Next day headache, vertigo,

¹ The examination was made for me by Dr. W. H. Bates.

mental confusion, insomnia, weakness in right arm and leg, with tremor. These increased.

Status præsens, October, 1889: Patient is a stout, florid-looking man; has some weakness in right arm and leg; no facial or ocular paralysis. *Sensation*—Cutaneous: Patches of incomplete tactile and pain-anæsthesia on right forearm and fingers; right leg and foot showed also a slight degree of all forms of anæsthesia. No muscular or joint anæsthesia. Knee-jerks exaggerated, especially on right side; no clonus. Eyes: Vision good; insufficiency of external recti muscles abd. 4, add. 18-20. Visual field limited in right eye, not in left; no amblyopia, color-sense normal. Ears: Slight deafness to watch in right ear, not in left; deafness to high notes in right ear. Smell normal. Taste normal.

A study of the symptoms observed in the foregoing cases shows us that the most constant form of sensory anæsthesia is a limitation of the visual field.

Next in order come disorders of the cutaneous sensations; and of these the pain-sense is oftenest affected, then the temperature, and last the tactile sense.

The muscular and articular sensibility is rarely involved, and hysterical ataxia is rare.

The color-sense is sometimes implicated, but the complete inversion of the formula was not seen; color-blindness occurred in two cases.

The peripheral field very easily tires for color, so that a patient who at first could recognize a color in the outer limit of the perimeter, after a short time ceases to do so.

Limitation of the auditory field for high notes is common, and is usually associated with bone-deafness to some extent. Deafness to low notes is quite rare, but occurred in three cases. The auditory disturbances are much oftener observed in connection with hemianæsthesias.

The pharyngeal reflex is usually absent on the anæsthetic side in hemianæsthetic cases, but it was not absent on the sound side, nor was it absent with the less extensive bilateral anæsthesia of the skin.

The knee-jerk in hysterical hemiplegia was diminished or even temporarily absent. In paraplegia it varied.

Taste and smell were not lost except in the hemianæsthetic cases.

The frequency of the anæsthetic symptoms may be summarized thus:

1. Limitation of visual field.
2. Cutaneous anæsthesia—
 - (a) Pain.
 - (b) Temperature.
 - (c) Tactile.
3. Auditory disturbances: bone-deafness and limitations of field.
4. Dyschromatopsia.
5. Muscular and articular anæsthesia.

I will add a few words now regarding some of the special forms of anaesthesia.

The Cutaneous and Muscular Sensations.—The cutaneous anaesthetics are distributed quite often in zones or patches upon the extremities, and in the glove or stocking-like distribution. But they are also often unilateral.

The anaesthesia is more marked the more widely it is distributed, or the more rigidly it is confined to one side. Like hemiplegia, it may be deepest on the arm, and leave the leg and face before leaving the upper extremities. The profoundest types are nearly always associated with some paralysis and tremor, and when the muscular sensibility is involved the paralysis is still more surely present.

These facts all seem to point to a common cortical seat for motor and sensory functions.

The anaesthesia, if unilateral, may be transferred by hypnotic suggestion or cutaneous irritation. I was never able to do this in my cases, however; but I did succeed in removing the anaesthesia over certain areas by the use of metal disks, and this furnishes a test of its functional character.

The greater frequency of the loss of pain-sense in hysteria is, I think, a fact which other experimenters will confirm.

The temperature-sense is more often disordered than actually lost.

The tactile sense is usually a little affected in most cases, but it often remains relatively good long after pain-sense has disappeared.

Hysterical ataxia does, I know, occur; but it seems to be relatively rare, and was absent in all my cases. Even in profound types of hemianæsthesia with hemiplegia, the position of the limb may be appreciated by the patient.

In general, it may be said that the hysterical monoplegias and hemiplegias carry with them the profounder sensory disturbances. In hysterical paraplegia often no anaesthetic disorder is discoverable. Such cases are, in fact, rather functional spinal disorders than cortical or "ideal" paralyses like the hemi- and mono-plegias.

Anæsthetic hysteria is usually associated also with much mental depression.

A word, finally, in regard to the methods and difficulties of the examinations. In making the tests for anaesthesia in hysterical persons the greatest care has to be taken. Patients are often refractory, or soon get tired and become perverse and untrustworthy.

The examination of the skin and deeper sensations does not present so much difficulty. The eye-test, however, requires extra care. It must be remembered that an apparent limitation of the visual field may be due to stupidity or perverseness, or it may be due to refractive errors, to optic atrophy, or other organic eye-disease. Ziem

has asserted that it occurs in diseases of the nose and antrum (*Berl. klin. Wochenschr.*, xxv. p. 37, 1888; *Deutsche med. Wochenschr.*, xv. p. 5, 1889); Moravesik (*Neurol. Centralbl.*, 1890, p. 230) shows that the visual field may, in hypnotized persons, be enlarged through the influence of cutaneous, auditory, or odorous sensations, and that it may be contracted by depressing, and enlarged by pleasurable emotions.

A point in visual examinations of the field, also of importance, is the intensity of the light. Persons with a contracted field for a white disk have a large field for a bright light; and by using bright-colored lights very different perimetric charts will be obtained.

The symptom of contraction of the visual field, therefore, is one whose significance must be closely weighed.

I have made this examination in a large number of neurasthenic persons, and a few epileptics, and in a case of *paralysis agitans* and Basedow's disease; I did not find any limitation, and the investigations of others also tend to show that it is not found in the neurasthenias or the great neuroses other than hysteria.

There have not been many studies yet of the limitation of the auditory field, particularly for low notes. In testing here it must be remembered that some people are born deaf for high notes, and that in ordinary partial deafness the hearing of high notes may be most impaired.

The test of hearing for low notes has been often made by me, and deafness rarely discovered, but it certainly is present sometimes. Bone-deafness usually accompanies the limited auditory field.

In conclusion, I have hoped to bring out some further facts which will give more certainty to our knowledge of the stigmata of hysteria, and enable us to speak with greater confidence of its existence.

The characteristics of hysterical anaesthesia are:

1. Its frequent presence in the retinal field, and its peculiar distribution here.
2. Its distribution on the skin, affecting first the pain-nerves, and its modification, disappearance, or transfer by metals, or suggestion, or cutaneous irritants.
3. Its peculiar involvement of the auditory nerve, causing deafness to high and even low notes, as well as its dulling the hearing generally.
4. The rarity of muscular and articular anaesthesia, except in connection with profound paralysis.
5. The involvement of the taste and smell.

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See, also, a very copious bibliography by Thornburn in his work, On the Surgery of the Spinal Cord, p. 225.

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